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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/770,358	01/25/2001	Ashish Thusoo	256/295	7894

23639 7590 07/18/2003

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EXAMINER

TO, BAOQUOC N

ART UNIT	PAPER NUMBER
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2172

DATE MAILED: 07/18/2003

6

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/770,358

Applicant(s)

THUSOO ET AL.

Examiner

Baoquoc N To

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

1. Claims 1-16 are pending in this application and claims 17-32 are added on amendment filed on 05/05/03.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 05/05/03. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Response to Arguments

3. Applicant's arguments with respect to claims 1, 5, 9 and 13 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cheng et al. (US. Patent No. 5,963,933) in view of Rothschild (US. Patent No. 6,567,823).

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Regarding on claims 1 and 17, Cheng teaches a method for applying a row from a source table to a destination table, the method comprising:

Selecting first column from a source table (left table) (col. 2, line 40);

Selecting a second column from a destination table (right table, line 41);

Performing an outer join (outer join) operation on the source table and the destination table using the first and second columns (col. 2, lines 41-44);

Cheng teaches updating and inserting however, Cheng does not teach updating each row in the destination table with a row from the result of the outer join operation containing a matching element in the first and second columns; and inserting into the destination table each row from the result set of the outer join operation with a non-matching element in the first and second columns. Rothschild teaches, "update statements are created on a target row by target row basic, through special join....fig.5 describes the insertion of new rows into the target table (after all the delete and update operations have been performed" (col. 9, lines 4-24). This teaches updating the row in the target table and inserting the new row in the target table after the join operation. Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to modify the teaching of Rothschild into Cheng because updating and inserting new rows into the target table would allow the consistency of data between the tables.

Regarding on claims 2 and 18, Cheng teaches the combining the rows in the source table that the first column has unique element in each row (col. 8, lines 39-42).

Regarding on claims 3 and 19, Cheng teaches the combining step further comprises:

Sorting the rows in the source table based on the element in the first column (col. 9, lines 23-25); and

Creating a groups of rows, wherein each row in the group of rows contains a matching element in the first column (col. 9, lines 23-25);

Combining the group of rows into a single row (col. 9, lines 30-35).

Regarding on claims 4 and 20, Cheng does not explicitly teach the outer join operation uses an equal comparison operator for a comparison statement (equals "=") (col. 4, lines 4, lines 29-36).

Regarding on claims 5 and 21, Cheng teaches a single query language statement to insert a new row or update an existing row in database table, the statement implementing a process comprising the steps of:

Selecting from a source table (left table) a first column comprising a plurality of elements (col. 2, line 40);

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Selecting from a destination table (right table) a second column comprising a plurality of elements (col. 2, line 41);

Determining a set of matching rows based upon the success of a comparison operation on an element in the first column and an element in the second column (col. 9, lines 24-28);

Determining a set of non-matching rows based upon the failure of a comparison operation on the first column element and the second column element (col. 10, lines 3-37);

Cheng teaches updating and inserting commands; however, Cheng does not teach updating the destination table with the set of matching rows; and inserting into destination table the set of non-matching rows. On the other hand, Rothschild teaches, "update statements are created on a target row by target row basis, through special join....fig.5 describes the insertion of new rows into the target table (after all the delete and update operations have been performed" (col. 9, lines 4-24). This teaches updating the row in the target table and inserting the new row in the target table after the join operation. Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to modify the teaching of Rothschild into Cheng because updating and inserting new rows into the target table would allow the consistency of data between the tables.

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Regarding on claims 6 and 22, Cheng teaches combining the rows in the source table, wherein the resulting source table has a unique element in each row of the first column (col. 8, lines 39-42).

Regarding on claims 7 and 23, Cheng teaches the combining step further comprises:

Sorting the rows in the source table based on the element in the first column (col. 9, lines 23-25); and

Creating a group of rows, wherein each row in the group of rows contains a matching element in the first column (col. 9, lines 23-25);

Combining the group of rows into a single row (col. 9, lines 30-35).

Regarding on claims 8 and 24, Cheng teaches the comparison operation uses an equal comparison operator (equals "=") (col. 4, lines 4, lines 29-36).

Regarding on claims 9 and 25, Cheng teaches a method for upserting a source table with a destination table in a single query language, the method comprising:

Selecting from a source table (left table) a first column comprising a plurality of elements (col. 2, line 40);

Selecting from a destination table (right table) a second column comprising a plurality of elements (col. 2, line 41);

Cheng teaches the outer join operating uses the comparison operator and updating and inserting processes; however, Cheng does not teach the updating a row from a destination table with a row from the source table upon the success of a comparison operation on an element in the first column of the row from the source table and an element in the second column of the row from the destination table; and inserting a row from the source table into the table upon the failure of a comparison operation on an element in the first column of the row from the source table and an element in the second column of the row from the destination table. On the other hand, Rothschild teaches, "update statements are created on a target row by target row basic, through special join....fig.5 describes the insertion of new rows into the target table (after all the delete and update operations have been performed" (col. 9, lines 4-24). This teaches updating the row in the target table and inserting the new row in the target table after the join operation. Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to modify the teaching of Rothschild into Cheng because updating and inserting new rows into the target table would allow the system to maintain data integrity between tables in the database.

Regarding on claims 10 and 26, Cheng teaches combining the rows in the source table, wherein the resulting source table has a unique element in each row of the first column (col. 8, lines 39-42).

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Regarding on claims 11 and 27, Cheng teaches the combining the step further comprises:

Sorting the rows in the source table based on the element in the first column (col. 9, lines 23-25); and

Creating a group of rows, wherein each row in the group of rows contains a matching element in the first column (col. 9, lines 23-25);

Combining the group of rows into a single row (col. 9, lines 30-35).

Regarding on claims 12 and 28, Cheng teaches the comparison operation uses an equal comparison operator (equals "=") (col. 4, lines 4, lines 29-36).

Regarding on claims 13 and 29, Cheng teaches a computer implemented method for aggregating data in a database, comprising:

Parsing from a command line, a command, a source table (left table), a destination table (right table), a source key, and a destination key (col. 2, lines 42-47);

Comparing the source key in each row of the source table with the destination key in each row of the destination table (col. 9, lines 20-24);

Determining a set of update rows based upon the success of a comparison operation performed on the source key and the destination key (col. 9, lines 29-31);

Determining a set of insert rows based upon the failure of a comparison operation performed on the source key and the destination key (col. 9, lines 32-37);

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Cheng teaches updating and inserting processes; however, Cheng does not teach the updating the destination table with set of update rows; and inserting to the destination table the set of insert rows. On the other hand, Rothschild teaches, "update statements are created on a target row by target row basis, through special join....fig.5 describes the insertion of new rows into the target table (after all the delete and update operations have been performed" (col. 9, lines 4-24). This teaches updating the row in the target table and inserting the new row in the target table after the join operation. Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to modify the teaching of Rothschild into Cheng because updating and inserting new rows into the target table would allow the consistency of data between the tables.

Regarding on claims 14 and 30, Cheng teaches combining the rows in the source table, wherein the resulting source table has a unique source key in each row of the source table (col. 8, lines 39-42).

Regarding on claims 15 and 31, Cheng teaches sorting the rows in the source table based on the source key (col. 9, lines 23-25); and

Creating a group of rows, wherein each row in the group of rows contain a matching element in the source key (col. 9, lines 23-25);

Combining the group of rows into a single row (col. 9, lines 30-35).

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Regarding on claims 16 and 32, Cheng teaches the comparison operation uses an equal comparison operator (equals "=") (col. 4, lines 4, lines 29-36).

Contact Information

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Baoquoc N. To whose telephone number is (703) 305-1949 or via e-mail BaoquocN.To@uspto.gov. The examiner can normally be reached on Monday-Friday: 8:00 AM – 4:30 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Y. Vu can be reached at (703) 305-4393.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231.

The fax numbers for the organization where this application or proceeding is assigned are as follow:

- (703) 746-7238 [After Final Communication]
- (703) 746-7239 [Official Communication]
- (703) 746-7240 [Non-Official Communication]

Hand-delivered responses should be brought to:

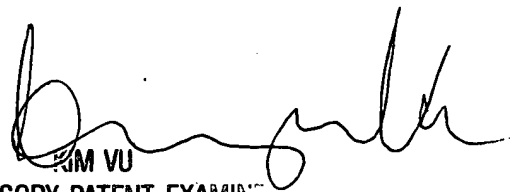
Crystal Park II

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Baoquoc N. To
July 7, 2002


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